
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Alan W. Sinclair	Attorney Docket No.: SDK1P018/467
Application No.: 10/772,855	Examiner: ELMORE, STEPHEN C.
Filed: February 4, 2004	Group: 2185
Title: DUAL MEDIA STORAGE DEVICE	Confirmation No.: 6534

COMMUNICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner Elmore:

Enclosed please find a corrected Information Disclosure Statement originally submitted on May 22, 2006. Please note the cited reference No. 5 under U.S. PATENT APPLICATION PUBLICATION is now correctly listed with the US Publication No. 20050125603. This publication is also cited in the Notice of References in the Office Action dated March 24, 2006 from Patent Application No. 10/772,789. In addition, the cited reference No. 4 under U.S. PATENTS is now correctly listed as U.S. Patent No. 6,286,056. The undersigned apologizes for this minor oversight and respectfully requests that the Examiner sign the attached IDS form and return it to the Applicant.

Applicant submits herewith the copy of the corrected Information Disclosure Statement and the Office Action from Patent Application No. 10/772,789.

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP

/RMahboubian/
Ramin Mahboubian
Registration No. 44,890

July 13, 2006

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Not for submission under 37 CFR 1.99)</i>	Application Number		10772855
	Filing Date		2004-02-04
	First Named Inventor		Alan Welsh sinclair
	Art Unit		2185
	Examiner Name		ELMORE, STEPHEN C.
	Attorney Docket Number		SDK1P018

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	5544356		1996-08-06	Robinson et al.	
	2	5708846		1998-01-13	Ryan	
	3	5754888		1998-05-19	Yang et al.	
	4	6286056		2001-09-04	Edgar et al.	
	5	6408357		2002-06-18	Hanmann et al.	
	6	6424486		2002-07-23	Heaton et al.	
	7	6646948		2003-11-11	Stence et al.	
If you wish to add additional U.S. Patent citation information please click the Add button.						
U.S.PATENT APPLICATION PUBLICATIONS						

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	10772855
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	20010052038		2001-12-13	Fallon et al.	
	2	20020069354		2002-06-06	Fallon et al.	
	3	20050125600		2005-06-09	Ehrlich	
	4	20050125602		2005-06-09	Ehrlich	
	5	20050125603		2005-06-09	Ehrlich	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
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**INFORMATION DISCLOSURE
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(Not for submission under 37 CFR 1.99)

Application Number	10772855
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Examiner Name	ELMORE, STEPHEN C.
Attorney Docket Number	SDK1P018

	1	PCT Search Report and Written Opinion from International Application No. PCT/US2005/000275. <input type="checkbox"/>
	2	Office Action of March 24, 2006 from Application No. 10/772,789. <input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	10772855
Filing Date	2004-02-04
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Attorney Docket Number	SDK1P018

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- See attached certification statement.
 Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
 None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/RMahboubian/	Date (YYYY-MM-DD)	2006-07-13
Name/Print	Ramin Mahboubian	Registration Number	44890

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,789	02/04/2004	Alan Welsh Sinclair	SDK1P019/525	5233
22434	7590	03/24/2006		
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250				EXAMINER
				ELMORE, STEPHEN C
			ART UNIT	PAPER NUMBER
			2185	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
10/772,789	SINCLAIR, ALAN WELSH
Examiner	Art Unit
Stephen Elmore	2185

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 04 February 2004:
2a) This action is FINAL. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 14-15,19,20,23 and 24 is/are rejected.
7) Claim(s) 2,3,16-18,21 and 22 is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
10) The drawing(s) filed on 04 February 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SE/Elm
STEPHEN C. ELMORE
PRIMARY EXAMINER

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 6/18/04, 2/9/06

- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date, _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

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DETAILED ACTION

1. This Office action responds to the application and preliminary amendment filed February 4, 2004.
2. Claims 1-20 are presented for examination.

Drawings

3. The drawings are objected to because:

a. Figures 1A, 1B and 4A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). These drawings have been described in terms of a system "that can (in the future) utilize the invention", or showing "conventional" technology, and so, they do not show the present invention, they only actually show prior art -- they need to be labeled accurately.

No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR § 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because:

a. The title of the invention is not adequately descriptive of the claimed invention. A new title is required that is clearly indicative of the invention to which the claims are directed. See MPEP § 606.01. The title is imprecise.

b. paragraph [0001] -- copending patent application needs serial number or patent number;

c. paragraph [0009] -- "Each planes" -- is non-idiomatic English, and in "erase black" -- block is misspelled;

d. paragraph [0059] is empty.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 4-15, 19, 20, and 23-24 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Stence et al., US 6,646,948, hereafter (Stence).

Stence teaches the claimed data storage system (col. 1, lines 30-33) [claims 1, 12 and 13], method for storing [claim 14] and retrieving [claim 20] data, and computer-readable medium [claim 24], comprising:

Claim 1,

a first non-volatile storage device, element 126, col. 3, lines 46-50; a second non-volatile storage device, element 112, col. 3, lines 18-23, having a slower average access time, col. 1, lines 52-54, and a higher capacity than the first storage device, col. 1, lines 54-57, wherein the slower average access time is the average delay that is necessary before the second non-volatile storage device can begin to write data, col. 5, lines 11-17; and a storage controller, col. 3, lines 24-26, operable to direct

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a first portion of data to the first storage device and a second portion of data to the second storage device, col. 12, lines 37-41, col. 14, line 66 - col. 15, line 3;

Claim 12,

the subject matter of claim 12 differs from that of claim 1 only in respect to the activities of reading instead of writing data to the claimed storage devices, Stence also teaches a storage controller operable to retrieve a first portion of data form the first storage device and a second portion of data form the second storage device, col. 15, lines 17-28, thus meeting the limitations of claim 12;

Claim 13,

the subject matter of claim 13 differs from the subject matter of claim 1 in that the subject matter of claim 13 is not limited to non-volatile storage devices, and in that claim 13 specifies that the first portion is head data and the second portion is body data and in that claim 13 specifies using a head table; Stence teaches both head data and body data as beginning and remaining part of a file, col. 15, lines 17-19, as well as teaching head table as a master list, col. 4, lines 1-5, col. 13, lines 36-38;

Claim 14,

the subject matter features of claim 14 correspond to method activities related to the performance of these methods by the features of claim 1, except that claim 14 also claims a step of causing, prior to the completion of storing the first portion of the data fragment in the first storage device, a second storage device to be prepared to write data, Stence teaches the use of a buffer for the data write to the second storage device, col. 6, lines 33-43, and the use of a clearing algorithm to ensure that there is always adequate buffer space available for a data write, col. 6, lines 1-3 and lines 59-65, which can be considered to be an operation to prepare the second storage to write data;

Claim 20,

the subject matter of claim 20 correspond to method features corresponding to claim 12, and additionally claim 20 claims a step causing, prior to the completion of reading the first portion of the data fragment in the first storage device, a second storage device to be prepared to read a remaining portion of the data, this is taught, col. 15, lines 4-29, this is taught as the activity of reading the

beginning part of the file while moving the read/write head to retrieve the remaining portion of the data, and Figure 14;

Claim 24,

the subject matter of claim 24 relates to a computer readable medium including at least computer program code for storing data, and to the computer readable medium containing computer program code to perform the steps of the methods corresponding to claim 14, therefore, the limitations of claim 24 are also taught by Stence since the processor 116 performs the claimed method steps by executing instructions which have been stored inherently in a computer readable medium;

Dependent Claims --

Claims 4 and 5, these limitations are taught as inherent to the practice of old and well-known garbage collection processes of the non-volatile storage device 126 (IC based memory) using conventional memory processes necessary to the devices being used in relation to programmed processors 116 for data storage and recovery of valuable memory spaces in these IC based memory devices;

Claim 6, these limitations are taught as inherent to the delay in write access to the storage 112;

Claims 7 and 8, Official notice is taken that the using of non-volatile IC based storage devices by storing the stored data in either ring buffer or cyclic buffer arrangements of logical addresses is old and well-known in the art of use of IC based memories for buffering purposes, which use is taught at col. 6 ,lines 33-43 and 59-65;

Claim 9, these limitations are taught at col. 8, line 65 - col. 9, line 3;

Claim 10, these limitations taught as elements 126 and 112;

Claim 11, the solid-state memory is flash is taught inherently as a member of the set of non-volatile memories, 126, or IC base memory, col. 1, lines 44;

Claim 15, the claimed use of a head table is taught as use of the master list which is inherently updated;

Claims 19 and 23, these limitations are taught, col. 6, lines 9-16, since the read request retrieves the entire requested data from media 112, it had inherently to have been completely stored in media 112 as a complete write entirely without any data portion having been previously written to 126.

Allowable Subject Matter

7. Claims 2, 3, 16-18, 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Elmore whose telephone number is (571) 272-4436. The examiner can normally be reached on Mon-Fri from 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SE
STEPHEN C. ELMORE
PRIMARY EXAMINER

March 19, 2006

Notice of References CitedApplication/Control No.
10/772,789Applicant(s)/Patent Under
Reexamination
SINCLAIR, ALAN WELSHExaminer
Stephen ElmoreArt Unit
2185

Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,424,486	07-2002	Heaton et al.	360/78.05
*	B US-6,286,056	09-2001	Edgar et al.	710/5
*	C US-5,544,356	08-1996	Robinson et al.	707/205
*	D US-2005/0125602	06-2005	Ehrlich, Richard M.	711/112
*	E US-2005/0125600	06-2005	Ehrlich, Richard M.	711/112
*	F US-2005/0125603	06-2005	Ehrlich, Richard M.	711/112
*	G US-2002/0069354	06-2002	Fallon et al.	713/2
*	H US-2001/0052038	12-2001	Fallon et al.	710/68
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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V	
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X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)

Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.